| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 13 | "6528486" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:53 |
| L2 | 2 | l1 and heterologous | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:54 |
| L3 | 0 | l1 and signal adj sequence | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:54 |
| L4 | 6 | l1 and signal | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:54 |
| L5 | 507 | glp and heterologous | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:55 |
| L6 | 0 | l5 and heterolous adj sequence | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:55 |
| L7 | 0 | l5 and heterolous same sequence | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:55 |
| L8 | 0 | l5 and heterolous same seq$ | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:56 |
| L9 | 484 | l5 and sequence | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:57 |
| L10 | 0 | l9 and heterolous near sequence | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:57 |
| L11 | 0 | l9 and heterolous same sequence | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:58 |
| L12 | 0 | l9 and heterolous and sequence | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:58 |
| L13 | 0 | glp and heterolous adj sequence | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:58 |
| L14 | 0 | glp and heterolous | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:58 |
| L15 | 83 | glp and heterologous adj sequence | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:59 |

| | | | | | | |
|---|---|---|---|---|---|---|
| L16 | 47 | l15 and diabetes | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:59 |
| L17 | 42 | l16 and analog$ | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 11:59 |
| L18 | 1 | l17 and @py<"2001" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:00 |
| L19 | 3 | l17 and @py<"2003" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 16:11 |
| L20 | 13 | l17 and @py<"2004" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:05 |
| L21 | 306 | l9 and fusion adj protein | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:06 |
| L22 | 5 | l21 and gly8 | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:08 |
| L23 | 47 | l21 and @py<"2002" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:08 |
| L24 | 30 | l21 and @py<"2001" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:09 |
| L25 | 7649 | heterologous adj sequence | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:10 |
| L26 | 83 | l25 and glp | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:10 |
| L27 | 8 | l26 and @py<"2002" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:14 |
| L28 | 22 | gly8 and glp | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:14 |
| L29 | 4 | l28 and @py<"2002" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 15:25 |
| L30 | 21 | l25 and preproglu$ | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:54 |
| L31 | 229 | preproglu$ | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:55 |

| | | | | | | |
|---|---|---|---|---|---|---|
| L32 | 70 | l31 and @py<"2002" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:55 |
| L33 | 46 | l32 and glp | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:55 |
| L34 | 34 | l33 and @py<"2001" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 12:55 |
| L35 | 26 | l33 and @py<"2000" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 13:03 |
| L36 | 0 | l32 and glp8 | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 13:03 |
| L37 | 4 | l32 and glp near "8" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 13:03 |
| L38 | 5 | "6468756" | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 15:25 |
| L39 | 5 | l38 and diabetes | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 15:25 |
| L40 | 252 | johnson adj jeffrey | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 16:12 |
| L41 | 4 | zhou adj yun near ping | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 16:13 |
| L42 | 253 | l40 l41 | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 16:13 |
| L43 | 1 | l42 and glp | US-PGPUB; USPAT; DERWENT | OR | ON | 2006/01/26 16:13 |

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=> d his

     (FILE 'HOME' ENTERED AT 15:52:07 ON 26 JAN 2006)

     FILE 'CAPLUS, MEDLINE, BIOSIS' ENTERED AT 15:52:29 ON 26 JAN 2006
L1          1310 S HETEROLOGOUS (1W) SEQUENCE
L2          8337 S GLP
L3             1 S GLP8
L4             3 S L1 (L) L2
L5             3 DUP REM L4 (0 DUPLICATES REMOVED)
L6            15 S GLP (1W) 8
L7             6 DUP REM L6 (9 DUPLICATES REMOVED)
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L5 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Methods of treating diabetes and other blood sugar disorders by glucagon-like peptide 1 gene or cell therapy for reducing serum triglycerides and reducing lipid accumulation in liver
PY 2005
IN Wadsworth, Samuel; Armentano, Donna; Gregory, Richard J.; Parsons, Geoffrey
SO U.S. Pat. Appl. Publ., 70 pp.
CODEN: USXXCO
IT Nucleic acids
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(encoding **GLP**-1 precursor linked to **heterologous** signal **sequence**; treating diabetes and other blood sugar disorders by glucagon-like peptide 1 gene or cell therapy for reducing serum triglycerides and reducing lipid accumulation in liver)
IT DNA
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(for **GLP**-1 precursor linked to **heterologous** signal **sequence**; treating diabetes and other blood sugar disorders by glucagon-like peptide 1 gene or cell therapy for reducing serum triglycerides and reducing lipid accumulation in liver)

L5 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Sequences of human glucagon-like 1 peptide (GLP-1) and use for treating diabetes and other blood sugar disorders
PY 2004
2004
IN Wadsworth, Samuel C.; Armentano, Donna; Gregory, Richard J.; Parsons, Geoffrey
SO U.S. Pat. Appl. Publ., 56 pp., Cont.-in-part of U.S. Ser. No. 215,272.
CODEN: USXXCO
AB The invention provides sequences of a precursor glucagon-like peptide 1 ( **GLP**-1) comprising human **GLP**-1 linked to a **heterologous** signal **sequence**. The invention also relates to a method of promoting insulin production in an individual comprising administering to the individual an effective amount of a nucleic acid encoding a precursor **GLP**-1. The present invention also relates to a method of treating an individual having a blood sugar defect (e.g., type I or type II diabetes), comprising administering to the individual an effective amount of a nucleic acid encoding the precursor **GLP**-1. In a particular embodiment, the invention pertains to a method of treating an individual having a blood sugar defect sugar defect comprising administering to the individual an effective amount of a nucleic acid encoding a precursor **GLP**-1 wherein the precursor **GLP**-1 comprises a signal sequence which codes for precursor cleavage at the activation cleavage site of the precursor **GLP**-1.

L5 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Sequences of human glucagon-like 1 peptide (GLP-1) and use for treating diabetes and other blood sugar disorders
PY 2003
2005
2005
IN Wadsworth, Samuel C.; Armentano, Donna; Gregory, Richard J.; Parsons, Geoffrey
SO PCT Int. Appl., 69 pp.
CODEN: PIXXD2
AB The invention provides sequences of a precursor glucagon-like peptide 1 ( **GLP**-1) comprising human **GLP**-1 linked to a **heterologous** signal **sequence**. The invention also relates to a method of promoting insulin production in an individual comprising administering to the individual an effective amount of a nucleic acid encoding a precursor **GLP**-1. The present invention also relates to a method of treating an individual having a blood sugar defect

(e.g., type I or type II diabetes), comprising administering to the individual an effective amount of a nucleic acid encoding the precursor **GLP**-1. In a particular embodiment, the invention pertains to a method of treating an individual having a blood sugar defect sugar defect comprising administering to the individual an effective amount of a nucleic acid encoding a precursor **GLP**-1 wherein the precursor **GLP**-1 comprises a signal sequence which codes for precursor cleavage at the activation cleavage site of the precursor **GLP**-1.

=> d l3

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:44295 CAPLUS
DN 130:219004
TI Arabidopsis thaliana contains a large family of germin-like proteins: characterization of cDNA and genomic sequences encoding 12 unique family members
AU Carter, Clay; Graham, Richard A.; Thornburg, Robert W.
CS Department of Biochemistry and Biophysics, Iowa State University, Ames, IA, 50011, USA
SO Plant Molecular Biology (1998), 38(6), 929-943
CODEN: PMBIDB; ISSN: 0167-4412
PB Kluwer Academic Publishers
DT Journal
LA English
RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s glp (1w) 8
L6 15 GLP (1W) 8

=> dup rem l6
PROCESSING COMPLETED FOR L6
L7 6 DUP REM L6 (9 DUPLICATES REMOVED)

=> d l7 1-6 ti py au so kwic

L7 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
TI The importance of the nine-amino acid C-terminal sequence of exendin-4 for binding to the GLP-1 receptor and for biological activity
PY 2003
AU Doyle, Maire E.; Theodorakis, Michael J.; Holloway, Harold W.; Bernier, Michel; Greig, Nigel H.; Egan, Josephine M.
SO Regulatory Peptides (2003), 114(2-3), 153-158
CODEN: REPPDY; ISSN: 0167-0115
AB . . . The addition of this nine-AA sequence to GLP-1 improved the affinity of both GLP-1 and the DPP IV resistant analog **GLP**-1 **8** -glycine for the GLP-1 receptor (IC50: GLP-1 Gly8 [GG], 220±23 nM; GLP-1 Gly8 Ex (31-39), 74±11 nM). Observations of the cAMP. . .

L7 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
TI Insertion of an N-terminal 6-aminohexanoic acid after the 7 amino acid position of glucagon-like peptide-1 produces a long-acting hypoglycemic agent
PY 2001
AU Doyle, Maire E.; Greig, Nigel H.; Holloway, Harold W.; Betkey, Jennifer A.; Bernier, Michel; Egan, Josephine M.
SO Endocrinology (2001), 142(10), 4462-4468
CODEN: ENDOAO; ISSN: 0013-7227
AB . . . 7 and 8. The authors have compared the biol. activity of this new compound, GLP-1 Aha8, with the previously described **GLP**-1 **8**-glycine (GLP-1 Gly8) analog. GLP-1 Aha8 (10 nM) was equipotent with GLP-1 (10 nM) in stimulating insulin secretion in RIN 1046-38. . .

L7 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
TI Glucagon-like peptide-1 infusion must be maintained for 24 h/day to obtain

acceptable glycemia in type 2 diabetic patients who are poorly controlled on sulphonylurea treatment
PY 2001
AU Larsen, Jens; Hylleberg, Birgitte; Ng, Kevin; Damsbo, Peter
SO Diabetes Care (2001), 24(8), 1416-1421
CODEN: DICAD2; ISSN: 0149-5992
AB . . . 7 minus AUC for day 0 divided by 24 h) was statistically significantly different from placebo ($P \leq 0.001$). The **GLP**-1 **8** ng · kg-1 · min-1 dose given for 24 h was more efficacious than any of the other doses (P. . .

L7 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
TI N-Terminally modified GLP-1 derivatives
PY 1999
1999
2000
2002
IN Knudsen, Liselotte Bjerre; Huusfeldt, Per Olaf; Nielsen, Per Franklin; Madsen, Kjeld
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
AB N-terminally modified derivs. of human glucagon-like peptide-1 (GLP-1), A-NH-**GLP**-1(**8**-B)-X [A is YCR2R3CHR1CO, YCR2R3CO, YCR2R3CH2, where R1, R2, R3 = H, alkyl, (un)substituted Ph, NH2, alkanamido, OH, alkoxy, halo, alkylsulfonyl,. . . group] or their analogs, were prepared for the treatment of obesity and insulin dependent or non-insulin dependent diabetes mellitus. Thus, Arg34,Ala8[Nα-(imidazol-4-ylacetyl)],Lys26[Nε-[Nγ-hexadecanoyl(γ-aminobutyroyl)]]**GLP**-1 (**8**-37) was prepared via reaction of Arg34,Ala8[Nα-(imidazol-4-ylacetyl)]- **GLP**-1 (**8**-37)-OH with Nγ-hexadecanoyl-γ-aminobutyric acid succinimide ester.

L7 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
TI Structure-activity relationships of glucagon-like peptide-1(7-36)amide: insulinotropic activities in perfused rat pancreases, and receptor binding and cyclic AMP production in RINm5F cells
PY 1994
AU Watanabe, Y.; Kawai, K.; Ohashi, S.; Yokota, C.; Suzuki, S.; Yamashita, K.
SO Journal of Endocrinology (1994), 140(1), 45-52
CODEN: JOENAK; ISSN: 0022-0795
AB . . . (Asp31) of GLP-1(7-36)amide with an amino acid of GH-releasing factor possessing only slight insulinotropic activity, and three tentative antagonists including [Glu15]-**GLP**-1(**8**-36)amide. Their insulinotropic activities were assessed by rat pancreas perfusion expts., and binding affinity to GLP-1 receptors and stimulation of cAMP. . . estimated as GLP-1(7-36)amide = Tyr16 > Lys18, Lys27 > Gly21 > Asp31 » Ser15, Arg17 > Ala10 » GRF > [Glu15]-**GLP**-1(**8**-36) amide. Displacement activity against 125I-labeled GLP-1(7-36)amide binding and stimulatory activity for cAMP production in RINm5F cells correlated well with their. . . to its binding to the receptor, although they are less important compared with those of the N-terminal half, and (3) [Glu15]-**GLP**-1(**8**-36) amide is not an antagonist of GLP-1(7-36)amide as opposed to des-His1 [Glu9] glucagon amide which is a potent glucagon antagonist.

L7 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5
TI Glucagon-like peptide-I analogs: effects on insulin secretion and adenosine 3',5'-monophosphate formation
PY 1990
AU Gefel, Dov; Hendrick, Grant K.; Mojsov, Svetlana; Habener, Joel; Weir, Gordon C.
SO Endocrinology (1990), 126(4), 2164-8
CODEN: ENDOAO; ISSN: 0013-7227
AB . . . at 10-9 M and was as active as GLP-I-(7-37) at 10-8 M. GLP-I-(7-33) had no effect at any concentration tested. **GLP**-I-(**8**-37) had no effect on insulin release at 10-9 and 10-8 M, but did have an effect at the high concentration. . .

L12 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
TI Methods of treating diabetes and other blood sugar disorders by glucagon-like peptide 1 gene or cell therapy for reducing serum triglycerides and reducing lipid accumulation in liver
PY 2005
IN Wadsworth, Samuel; Armentano, Donna; Gregory, Richard J.; Parsons, Geoffrey
SO U.S. Pat. Appl. Publ., 70 pp.
CODEN: USXXCO
IT 99676-46-7, Prohormone convertase 141760-45-4, Furin
RL: CAT (Catalyst use); USES (Uses)
(GLP-1 fusion proteins containing **cleavage** site for; treating diabetes and other blood sugar disorders by glucagon-like peptide 1 gene or cell therapy for reducing serum triglycerides and reducing lipid accumulation in liver)
IT 9041-92-3, α1 Antitrypsin 75432-63-2, **Preproglucagon**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(signal peptide from, fusion protein with GLP-1; treating diabetes and other blood sugar disorders by glucagon-like peptide 1 gene or cell therapy for reducing serum triglycerides and reducing lipid accumulation in liver)

L12 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
TI Sequences of human glucagon-like 1 peptide (GLP-1) and use for treating diabetes and other blood sugar disorders
PY 2004
2004
IN Wadsworth, Samuel C.; Armentano, Donna; Gregory, Richard J.; Parsons, Geoffrey
SO U.S. Pat. Appl. Publ., 56 pp., Cont.-in-part of U.S. Ser. No. 215,272.
CODEN: USXXCO
AB . . . of a nucleic acid encoding a precursor GLP-1 wherein the precursor GLP-1 comprises a signal sequence which codes for precursor **cleavage** at the activation **cleavage** site of the precursor GLP-1.
IT 99676-46-7, Prohormone convertase 141760-45-4, Furin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**cleavage**-site; sequences of human glucagon-like 1 peptide (GLP-1) and use for treating diabetes and other blood sugar disorders)
IT 498592-31-7P 498592-32-8P 498592-33-9P 498592-34-0P
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)
(furin **cleavage** sit sequence; sequences of human glucagon-like 1 peptide (GLP-1) and use for treating diabetes and other blood sugar disorders)
IT 9001-78-9, Alkaline phosphatase 9041-92-3 67763-96-6, Insulin like growth factor 1 75432-63-2, **Preproglucagon** 89468-62-2, Helodermin 141732-76-5, Exendin-4
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(signal peptide from; sequences of human glucagon-like 1 peptide (GLP-1) and use for treating diabetes and other blood sugar disorders)

L12 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
TI Sequences of human glucagon-like 1 peptide (GLP-1) and use for treating diabetes and other blood sugar disorders
PY 2003
2005
2005
IN Wadsworth, Samuel C.; Armentano, Donna; Gregory, Richard J.; Parsons, Geoffrey
SO PCT Int. Appl., 69 pp.
CODEN: PIXXD2
AB . . . of a nucleic acid encoding a precursor GLP-1 wherein the precursor GLP-1 comprises a signal sequence which codes for precursor **cleavage** at the activation **cleavage** site of the precursor GLP-1.
IT 99676-46-7, Prohormone convertase 141760-45-4, Furin

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**cleavage**-site; sequences of human glucagon-like 1 peptide (GLP-1) and use for treating diabetes and other blood sugar disorders)

IT 498592-31-7P 498592-32-8P 498592-33-9P 498592-34-0P
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)
(furin **cleavage** sit sequence; sequences of human glucagon-like 1 peptide (GLP-1) and use for treating diabetes and other blood sugar disorders)

IT 9001-78-9, Alkaline phosphatase 9041-92-3 67763-96-6, Insulin like growth factor 1 75432-63-2, **Preproglucagon** 89468-62-2, Helodermin 141732-76-5, Exendin-4
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(signal peptide from; sequences of human glucagon-like 1 peptide (GLP-1) and use for treating diabetes and other blood sugar disorders)

L12 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
TI cDNA cloning of proglucagon from the stomach and pancreas of the dog
PY 2001
AU Irwin, David M.
SO DNA Sequence (2001), 12(4), 253-260
CODEN: DNSEES; ISSN: 1042-5179
ST cDNA sequence dog **preproglucagon** stomach pancreas; protein sequence Canis dog **preproglucagon cleavage** peptide; sequence glucagon GLP1 GLP2 peptide dog Canis; peptide GRPP glicentin sequence Canis dog

IT Peptides, biological studies
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(GRPP (glicentin-related polypeptide); amino acid sequence of **preproglucagon** from dog, and sequence of peptides (glicentin, glucagon, GLP-1, GLP-2 and GRPP) resulting **cleavage** of prepro)

IT Protein sequences
(of **preproglucagon** from dog, and sequence of peptides (glucagon, GLP-1, GLP-2 and GRPP) resulting **cleavage** of prepro)

IT 9007-92-5, Glucagon, biological studies 71567-77-6, Glicentin 89750-14-1, Glucagon-related peptide 1 89750-15-2, Glucagon-like peptide 2
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence of **preproglucagon** from dog, and sequence of peptides (glicentin, glucagon, GLP-1, GLP-2 and GRPP) resulting **cleavage** of prepro)

IT 75432-63-2, **Preproglucagon**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence of **preproglucagon** from dog, and sequence of peptides (glucagon, GLP-1, GLP-2 and GRPP) resulting **cleavage** of prepro)

IT 16941-32-5, Glucagon (swine) 106612-94-6, 7-37-Glucagon-like peptide I (human) 460090-22-6 460099-16-5 460112-05-4
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence; of **preproglucagon** from dog, and sequence of peptides (glicentin, glucagon, GLP-1, GLP-2 and GRPP) resulting **cleavage** of prepro)

L12 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
TI Distribution of pre-pro-glucagon and glucagon-like peptide-1 receptor messenger RNAs in the rat central nervous system
PY 1999
AU Merchenthaler, Istvan; Lane, Malcolm; Shughrue, Paul
SO Journal of Comparative Neurology (1999), 403(2), 261-280
CODEN: JCNEAM; ISSN: 0021-9967
AB Glucagon-like peptide-1 (GLP-1) is derived from the peptide precursor pre-pro-glucagon (PPG) by enzymic **cleavage** and acts via its

receptor, glucagon-like peptide-1 receptor (GLP-1R). By using riboprobes complementary to PPG and GLP-1R, we described the. . .

ST **preproglucagon** GLP1 receptor brain

IT Brain
(amygdaloid body; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(cerebral cortex; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(habenula; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(hippocampus; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(hypothalamus, preoptic area; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(hypothalamus; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(locus ceruleus; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(medulla oblongata, reticular nucleus, lateral; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(medulla oblongata, vagal nucleus, dorsal; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(medulla oblongata, ventral; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(midbrain, interpeduncular nucleus; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(nucleus accumbens; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(nucleus basalis of Meynert; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(nucleus tractus solitarii; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(olfactory bulb; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(parabrachial nucleus; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(postrema area; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
Spinal cord
(**preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Glucagon-like peptide-1 receptors
mRNA
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

IT Brain
(raphe nucleus; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)
IT Brain
(septum pellucidum, lateral; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)
IT Brain
(stria terminalis bed nucleus; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)
IT Brain
(substantia nigra; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)
IT Brain
(temporal cortex; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)
IT Brain
(ventral tegmental area; **preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)
IT 75432-63-2, **Preproglucagon**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)
IT 89750-14-1, Glucagon-like peptide I
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**preproglucagon** and glucagon-like peptide-1 receptor mRNA distribution in rat central nervous system)

L12 ANSWER 7 OF 16 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
TI Peptide hormone processing in tumours: Biogenetic and diagnostic implications.
PY 1993
AU Rehfeld, J. F. [Reprint author]; Bardram, L.; Blanke, S.; Bundgaard, J. R.; Friis-Hansen, L.; Hilsted, L.; Johnsen, A. H.; Kofod, M.; Luttichau, H. R.
SO Tumor Biology, (1993) Vol. 14, No. 3, pp. 174-183.
ISSN: 1010-4283.
AB. . . bioactive peptides by multiple modifications during the transport from the endoplasmic reticulum to secretory granules. The modifications comprise different proteolytic **cleavages** and amino acid derivatizations. By constitutive secretion, the processing is less pronounced. The same prohormone may be expressed in several. . .
IT . . .
Sciences); Genetics; Metabolism; Molecular Genetics (Biochemistry and Molecular Biophysics); Oncology (Human Medicine, Medical Sciences)
IT Chemicals & Biochemicals
PROENKEPHALIN A; **PREPROGLUCAGON**; GASTRIN
IT Miscellaneous Descriptors
GASTRIN SECRETION; GASTRINOMA; LIVER; LYMPH NODE METASTASES; MESSENGER RNA; PEOOPIOMELANOCORTIN; **PREPROGLUCAGON**; PROENKEPHALIN A; TUMOR
RN 88402-54-4 (PROENKEPHALIN A)
75432-63-2 (**PREPROGLUCAGON**)
9002-76-0Q (GASTRIN)
144696-56-0Q (GASTRIN)

L12 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
TI Multiple forms of glucagon-like peptide-1 and glucagon-like immunoreactivities in canine gastrointestinal tract and their release into circulation
PY 1990
AU Namba, Mitsuyoshi; Itoh, Hidehiko; Watanabe, Nobuaki; Kono, Norio; Komatsu, Ryoya; Matsuyama, Tatsuo; Hirota, Meisei; Shima, Kenji; Tarui, Seiichiro
SO Biomedical Research (1990), 11(4), 247-54
CODEN: BRESD5; ISSN: 0388-6107
AB The distribution in the canine small intestine of glucagon-like peptide-1

(GLP-1) and glucagon-like immunoreactivities (GLI), coencoded by the mammalian **preproglucagon** gene, and their release into the regional mesenteric vein were investigated. GLP-1 immunoreactivity (GLP-1-IR) and GLI were present in high. . . of ≥4 different mol. forms. Evidently, the intestine stores and secretes GLP-1-IR and GLI with several mol. forms as the **cleavage** products of their common precursor, **preproglucagon**.

ST glucagon glucagonlike peptide metab intestine; **preproglucagon** processing intestine

IT Pancreas, metabolism
(**preproglucagon** processing by)

L12 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4

TI Cell-specific post-translational processing of **preproglucagon** expressed from a metallothionein-glucagon fusion gene

PY 1986

AU Drucker, Daniel J.; Mojsov, Svetlana; Habener, Joel F.

SO Journal of Biological Chemistry (1986), 261(21), 9637-43
CODEN: JBCHA3; ISSN: 0021-9258

TI Cell-specific post-translational processing of **preproglucagon** expressed from a metallothionein-glucagon fusion gene

AB . . . of glucagon and 2 addnl. glucagon-like peptides (GLPs) structurally related to glucagon and separated by intervening peptides. Glucagon arises by **cleavage** from the prohormone within the A cells of the pancreatic islets but in the intestine remains as part of a partially processed precursor (glicentin). To determine whether addnl. glucagon-like peptides are processed from **preproglucagon** [75432-63-2] and to analyze for potential cellular specificity in the processing of **preproglucagon**, a metallothionein-glucagon fusion gene was introduced and expressed in a fibroblast and 2 endocrine (pituitary and pancreatic islet) cell lines.. . . of the glucagon-like and intervening peptides suggests their potential as new bioactive peptides. The cellular specificity in the processing of **preproglucagon** indicates that the genetic determinants of the processing activity are complex and are expressed in a cell-specific manner.

ST glucagon metallothionein fusion gene processing; **preproglucagon** processing

IT Molecular cloning
(of metallothionein-glucagon fusion gene, in fibroblast and endocrine cell line, **preproglucagon** cell-specific post-translational processing in relation to)

L12 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5

TI Isolation and structure of the principal products of **preproglucagon** processing, including an amidated glucagon-like peptide

PY 1986

AU Andrews, P. C.; Hawke, David H.; Lee, Terry D.; Legesse, Kassu; Noe, Bryan D.; Shively, John E.

SO Journal of Biological Chemistry (1986), 261(18), 8128-33
CODEN: JBCHA3; ISSN: 0021-9258

TI Isolation and structure of the principal products of **preproglucagon** processing, including an amidated glucagon-like peptide

AB The principal products derived from in vivo processing of anglerfish **preproglucagon** II were isolated and their structures determined The structures were confirmed by a combination of automated Edman degradation, amino acid anal., and fast-atom bombardment mass spectrometry. The peptide corresponding to anglerfish **preproglucagon** II-(22-49) (numbering from the N-terminus of **preproglucagon**) was isolated intact and defines the site of signal **cleavage** to be between glutamine and methionine at positions 21 and 22, resp. Glucagon from the anglerfish **preproglucagon** gene II corresponded to **preproglucagon** II-(52-80) (numbering from the N-terminus). Three forms of a glucagon-like peptide derived from **preproglucagon** II was also isolated. The structure of the longest form was consistent with the sequence of **preproglucagon** II-(89-122) deduced from the

cDNA. The C-terminal portion deduced from the cDNA remains intact in this form. A 2nd form, **preproglucagon** II-(89-119) appears to result from proteolytic processing of the major form at the 2 adjacent arginine residues occurring at the. . . C terminus. This 2nd form has a glycine residue at its C terminus and is processed to the 3rd form ( **preproglucagon** II-(89-118)) which contains a C-terminal arginineamide. Radiolabeling studies in primary tissue culture supported the observation that glucagon (**preproglucagon** II-(52-80)), **preproglucagon** II-(89-122), and **preproglucagon** II (89-119) are products of proglucagon processing in vivo.

ST **preproglucagon** processing anglerfish

IT Anglerfish
(**preproglucagon** of, isolation and proteolytic processing of)

IT 85446-04-4P 103345-94-4P 103842-32-6P 104040-34-8P
RL: PRP (Properties); PREP (Preparation)
(isolation and amino acid sequence of, **preproglucagon** processing in relation to)

L12 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

TI Distribution of glucagon-like peptide I in canine and feline pancreas and gastrointestinal tract

PY 1986

AU Vaillant, Camille R.; Lund, P. Kay

SO Journal of Histochemistry and Cytochemistry (1986), 34(9), 1117-21
CODEN: JHCYAS; ISSN: 0022-1554

AB . . . tissue from dogs with canine pancreatic acinar atrophy. Northern blot anal. of mRNA from the latter tissue, using a rat **preproglucagon** cDNA probe, revealed a single mRNA species similar in size to the **preproglucagon** mRNA detected in fetal rat pancreas. The 3 antigenic determinants of pancreatic proglucagon were colocalized also in intestinal L-cells and. . . the GLP I sequence is not liberated from pancreatic proglucagon, the possibility exists that this putative hormone may be a **cleavage** product of proglucagon in the gastrointestinal tract.

L12 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6

TI Specific glucagon-related peptides isolated from anglerfish islets are metabolic **cleavage** products of (pre)proglucagon-II

PY 1986

AU Noe, Bryan D.; Andrews, Philip C.

SO Peptides (New York, NY, United States) (1986), 7(2), 331-6
CODEN: PPTDD5; ISSN: 0196-9781

TI Specific glucagon-related peptides isolated from anglerfish islets are metabolic **cleavage** products of (pre)proglucagon-II

AB Sequence analyses of cDNAs prepared from anglerfish islet mRNA have demonstrated the presence of mRNAs coding for 2 different **preproglucagons**, aPPGI and aPPG-II. Each of these precursors was predicted to contain 29- and 34-residue glucagon-related peptide as potential **cleavage** products. Recently, several glucagon-related peptides found in exts. of anglerfish islets have been isolated and characterized. To determine whether any of these peptides could be identified as metabolic **cleavage** products in anglerfish islets, differentially radiolabeled mol. weight 2500-8000 peptides from islet exts. were subjected to reverse-phase HPLC under varying conditions. The potential **cleavage** products aPPG-II[52-80] and aPPG-II[89-122] could be readily identified among the extract peptides. Both peptides became labeled appropriately (as predicted from. . . 3rd peptide (aPPG-II[89-119]) could be found among the labeled products in small amts. only. Thus, glucagon-II[52-80] and aGLP-II[89-122] are primary **cleavage** products of aPPG-II aGLP-IIc[89-119] may be a peptide generated more slowly by posttranslational modification of aGLP-II.

ST anglerfish islet **preproglucagon** II processing product; proglucagon II processing product anglerfish islet; glucagon related peptide anglerfish **preproglucagon** processing

IT Anglerfish
((pre)proglucagon II metabolic **cleavage** products of pancreatic islets of)

IT Pancreatic islet of Langerhans

((pre)proglucagon II metabolic **cleavage** products of, of anglerfish)

IT 85446-04-4P 103345-94-4P 103842-32-6P
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in **preproglucagon** II processing by anglerfish pancreatic islet)

L12 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 7
TI Molecular forms of glucagon-like peptides in man
PY 1985
AU George, S. K.; Uttenthal, L. O.; Ghiglione, M.; Bloom, S. R.
SO FEBS Letters (1985), 192(2), 275-8
CODEN: FEBLAL; ISSN: 0014-5793
AB Mol. forms of glucagon-like peptide (GLP) [96352-57-7] encoded by the human **preproglucagon** gene were analyzed by chromatog. combined with specific radioimmunoassays to the synthetic peptides. Whereas exts. of human pancreas and a glucagonoma contained a large proglucagon **cleavage** product possessing both GLP-1 [89750-14-1] and GLP-2 [89750-15-2] immunoreactivities, exts. of human intestine contained products corresponding to free GLP-1 and. . .

L12 ANSWER 14 OF 16 MEDLINE on STN DUPLICATE 8
TI Pre-proglucagon messenger ribonucleic acid: nucleotide and encoded amino acid sequences of the rat pancreatic complementary deoxyribonucleic acid.
PY 1984
AU Heinrich G; Gros P; Lund P K; Bentley R C; Habener J F
SO Endocrinology, (1984 Dec) 115 (6) 2176-81.
Journal code: 0375040. ISSN: 0013-7227.
AB . . . which include GH-releasing hormone, vasoactive intestinal peptide, secretin, and gastric inhibitory peptide. The synthesis of glucagon involves its specific proteolytic **cleavage** from **preproglucagon**, a large polyprotein precursor. To facilitate analyses of the cellular processing of pre-proglucagon and to begin studies of the regulation. . .
CN 0 (Nucleotides); 0 (Protein Precursors); 0 (RNA, Messenger); 0 (**preproglucagons**)

L12 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 9
TI Pancreatic **preproglucagon** cDNA contains two glucagon-related coding sequences arranged in tandem
PY 1982
AU Lund, P. Kay; Goodman, Richard H.; Dee, Phillip C.; Habener, Joel F.
SO Proceedings of the National Academy of Sciences of the United States of America (1982), 79(2), 345-9
CODEN: PNASA6; ISSN: 0027-8424
TI Pancreatic **preproglucagon** cDNA contains two glucagon-related coding sequences arranged in tandem
AB Recombinant plasmids containing DNA complementary to the mRNA encoding a pancreatic **preproglucagon** [75432-63-2], a product of cell-free translation of angler fish islet mRNAs shown previously by immunopptn. analyses to be a precursor. . . The cDNA of 630, 180 and 120 base pairs were isolated and correspond to most of the mRNA for the **preproglucagon** (650 bases). The cDNAs contain a protein coding sequence of 372 nucleotides and 5'- and 3'-untranslated regions of 58 and. . . the sequence of glucagon was found to be identical to mammalian glucagon in 20 of 29 positions, resides in the **preproglucagon** of 124 amino acids flanked by N- and C-peptide extensions of 52 and 43 amino acids, resp. The peptide extensions. . . with glucagon and the other peptides of the glucagon family (gastric inhibitory peptide, vasoactive intestinal peptide, and secretin). Thus, the **preproglucagon** mRNA contains 2 glucagon-related coding sequences arranged in tandem. The finding of Lys-Arg sequences flanking the glucagon and glucagon-related sequences suggest that these 2 peptides and a pentapeptide are formed in vivo by posttranslational **cleavages** of a common precursor.
ST **preproglucagon** mRNA sequence Lophius; glucagon peptide sequence Lophius
IT Lophius americanus

(**preproglucagon** and mRNA-specifying, sequences of)
IT Deoxyribonucleic acid sequences
(**preproglucagon** mRNA complementary, of Lophius americanus)

L12 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 10
TI Pancreatic pre-proglucagons are encoded by two separate mRNAs
PY 1981
AU Lund, P. Kay; Goodman, Richard H.; Habener, Joel F.
SO Journal of Biological Chemistry (1981), 256(13), 6515-18
CODEN: JBCHA3; ISSN: 0021-9258
AB . . . for a peptide of 29 amino acids flanked by Lys-Arg sequences typical of those found at the sites of post-translational **cleavages** of hormone precursors. Twenty of the 29 amino acids in the sequence were identical with those found in the sequence. . . of bacterial colonies containing the cDNA for the 12,500-dalton precursor. Thus, 2 sep. but partially homologous mRNAs encode the 2 **preproglucagons**
.
ST **preproglucagon** mRNA anglerfish; glucagon precursor mRNA Lophius; fish **preproglucagon** mRNA
IT Lophius americanus
(**preproglucagon** mRNA of, multiple forms of)
IT Ribonucleic acids, messenger
RL: BIOL (Biological study)
(**preproglucagon**-specifying, of anglerfish, multiple forms of)